

The auto component industry in India: Preparing for the future

Prepared for the 58th annual conference organized by the
Automotive Component Manufacturers Association of India (ACMA)

September 2018

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Executive summary

India is poised to soar, higher than many fast-growing large economies over the next decade. At the same time, automotive original equipment manufacturers (OEMs) and component manufacturers in the country aspire to achieve global eminence. The future of the auto OEM and auto component industry is being shaped by multiple trends, policies and discontinuities. What opportunities do these trends create for the auto component industry? And how can the industry prepare itself to capture a share of these opportunities?

This report outlines the growth potential and aspirations of the industry, the trends that are impacting it, the specific opportunities these create, and how auto component manufacturers could change themselves and ask for support from the ecosystem to capture these opportunities.

A PROMISING FUTURE

Growth indicators paint a picture of optimism for India—it might emerge as the world's fifth-largest economy by 2019,¹ and become a USD 4.7 tn economy in 2023.² Anticipation of a growing consumer class, enhanced ease of doing business, expanding infrastructure—such favourable factors could propel the country forward, and with it, India's automobile industry.

The Indian automotive OEM industry is already in a strong position. Globally, it is at the forefront of many segments—leading in two-wheelers, segment A cars, and tractors.³ The industry aspires to nearly triple vehicle sales by 2026, from 26 mn to 65 mn to 76 mn vehicles, across segments.⁴ These could be definitive tailwinds for the Indian automotive components industry, which has ambitions of its own by 2026—to double the contribution to manufacturing GDP with a four-fold growth in size and a six-fold growth in exports.⁵ While industry turnover has more than tripled (in Rupee terms) in the past decade, India's contribution to global turnover is approximately 3 percent.⁶ Clearly, there is substantial scope for growth in an industry being shaped by a variety of trends.

HERE AND NOW: TRENDS SHAPING THE AUTOMOTIVE INDUSTRY

As auto component manufacturers prepare for a future where they ramp up performance in India and globally, they need to account for numerous trends along four key dimensions that are shaping the industry:

- Constantly shifting market dynamics due to changing manufacturing locales, customer demands, operating models and priorities

1 <https://indianexpress.com/article/business/economy/india-to-surpass-britain-to-become-worlds-fifth-largest-economy-by-next-year-arun-jaitley-5332351/>

2 International Monetary Fund, April 2018

3 IHS Markit, Society of Indian Automobile Manufacturers, ICRA Research

4 Numbers drawn from Automotive Mission Plan 2026 and expert inputs on three-wheeler sales growth

5 Automotive Mission Plan 2026:
<http://www.siamindia.com/uploads/filemanager/47automotivemissionplan.pdf>

6 IHS Markit, ICRA Research

- The changing needs of OEMs, who are likely to want different, more agile and rapid component inputs as demand, timelines and processes keep shifting
- Technological improvements and discontinuities that are already starting to change revenue pools, trigger new competition and invite new forms of cooperation
- An evolving regulatory and trade environment forming the backdrop for it all

THE OPPORTUNITIES AHEAD

The interplay of trends across these themes could fashion 10 exciting opportunities for auto component manufacturers:

- Pursue export opportunities aggressively.
- Enhance import substitution.
- Offer premium features at “Indian costs” more rapidly than before.
- Focus on component categories that could contribute more to vehicle costs in the future.
- Expand aftermarket offerings to capture value from existing vehicle parc and aftermarket exports.
- Offer “rising star” components which could take off in the long run due to an increase in electric vehicle (EV) sales.
- Offer new or modified features that could be in demand with an increase in shared mobility penetration.
- Develop data-enabled services and solutions.
- Form partnerships and ecosystems to create and capture value.
- Expand portfolio to serve adjacent industries.

Identifying which opportunities fit best, and working strategically to seize them, could create a successful future for auto component manufacturers.

THE CHANGE WITHIN

Capturing the immense potential of these opportunities is conditional—auto component manufacturers would need to embrace change, with companywide dedication across four overarching areas:

- **Strategize to win**—create a significant and deliberate shift in how they think about people, product, channel, resources, etc.
- **Revamp leadership and talent**—acquire emerging skills, build local teams, and map talent to value.

- **Reset culture and mindset**—from an RFQ responder to a business developer, from do-it-yourself to being partnership led.
- **Achieve operational excellence**—across supply chain, quality, cost, delivery and service (QCDS), pricing and costing, data infrastructure.

COUNTING ON STAKEHOLDER SUPPORT FOR SUCCESS

Every group of stakeholders—industry body, the government, OEMs—has a critical role in supporting auto component manufacturers to achieve their full potential. The industry body could help to scale up International Procurement Offices (IPOs), develop skilling curriculums and guidelines, and co-create import substitution strategy among other things. The government could consider building Centres of Excellence on quality, evaluate setting up upskilling programs at vocational institutes and explore setting up performance cells among other policy initiatives. Lastly, auto OEMs could invest and collaborate in joint R&D and other innovation, work closely with the industry body and suppliers for import substitution and exports, extend best practices on audit and supplier development to suppliers, and assist in upskilling programs.

This support could help create a future in which the industry thrives, and India does, too.



Tremendous opportunities await on the back of India's expected strong economic progress in the years ahead. These opportunities are, however, conditional to auto component manufacturers embarking on several changes. Making the most of these opportunities could help auto component manufacturers leap forward to achieve global eminence.



A promising future—for India and the industry

India, along with its automotive and auto component manufacturing industries, is on a steady upward trajectory. With a GDP forecast of 7.5 percent till 2020, the country could be surging well ahead of other fast-growing large economies,⁷ helping the industry keep its foot firmly on the accelerator.

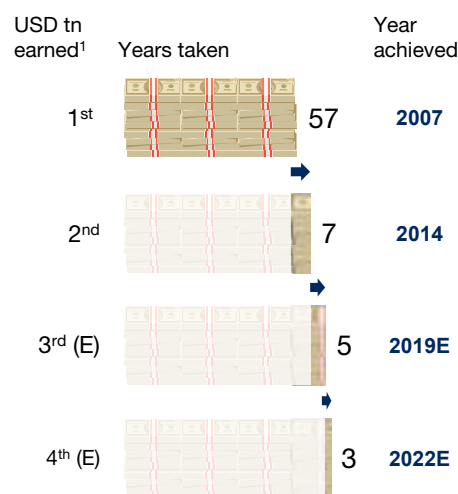
THE FORECAST FOR INDIA: A RAPID RISE

A leader among emerging economies, India is expected to be at the forefront of growth over the next few years. It could be the world's fifth-largest economy in 2019,⁸ and a USD 4.7 tn economy in 2023. India has been notching up successive trillions quicker than before, and might continue this pace, earning its third trillion in five years, and its fourth in just three more years (Exhibit 1).⁹ It also conquered 30 spots on the World Bank's Ease of Doing Business rankings between 2016 and 2017 to make it to the top 100 countries.¹⁰

Exhibit 1

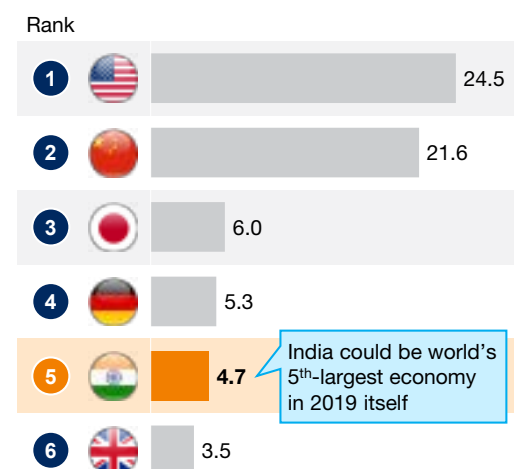
India is on an upward trajectory

India GDP growth



India is likely to be a USD 4.7 tn economy in 2023

USD tn, nominal GDP



1 Nominal GDP

SOURCE: International Monetary Fund, April 2018

With rapid urbanization, over 500 mn people will be living in Indian cities by 2030. Growing incomes could help many of these cities and regions mirror the GDP per capita of some high and middle-income nations. For instance, by 2026, New Delhi might match up to Russia of 2014, with a comparable GDP per capita (Exhibit 2).¹¹

7 Economist Intelligence Unit database

8 <https://indianexpress.com/article/business/economy/india-to-surpass-britain-to-become-worlds-fifth-largest-economy-by-next-year-arun-jaitley-5332351/>

9 International Monetary Fund, April 2018

10 <http://www.makeinindia.com/article/-/v/india-jumps-30-places-in-world-bank-s-doing-business-report-2018>

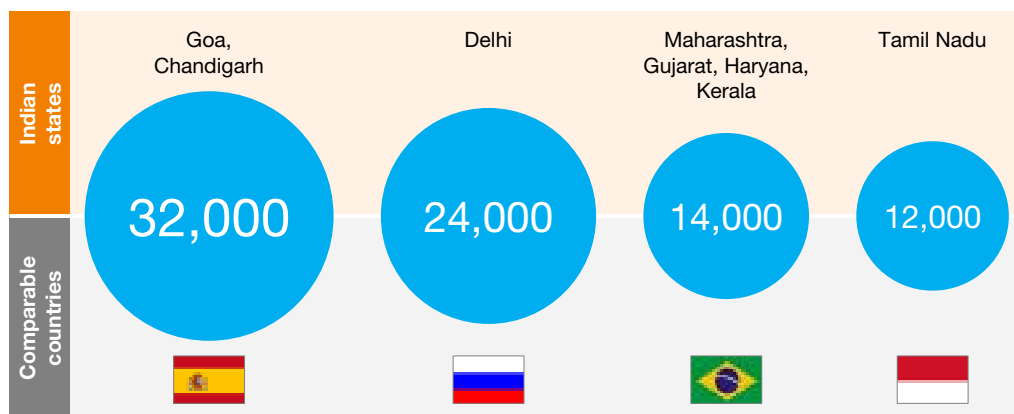
11 10 Urbanization estimates drawn from *India's economic geography in 2025: States, clusters, and cities*, a McKinsey Global Institute report, 2014

Exhibit 2

Growing GDP will support higher living standards

Estimated GDP per capita (PPP) in 2026¹ vs comparable country in 2014²

USD, 2012 base year



1 Average GDP per capita of group of states

2 2014 GDP per capita taken for comparable countries

SOURCE: *India's economic geography in 2025: States, clusters, and cities*, a McKinsey Global Institute report, 2014; World Bank

As prosperity grows, consumption rises—India's consuming class is expected to expand from 27 mn households in 2014 to 89 mn households by 2025.¹² The automotive industry is also expected to flourish, with the burgeoning consumer class investing in more and better vehicles across segments to serve their rising mobility needs.

INDIA'S GROWING AUTOMOTIVE AND COMPONENTS INDUSTRY

Indian automotive manufacturers have been very successful across segments in the local market as the population becomes more and more upwardly mobile. Globally, India's automotive industry is at the forefront of many segments—by volumes, it ranks number 1 in two-wheelers, segment A cars and tractors.¹³ India is renowned as a global hub for frugal and scalable engineering. Busy automotive clusters across India drive the industry—especially the three major clusters of Mumbai–Pune–Nasik–Aurangabad in the West, Chennai–Bangalore–Hosur in the South, and Delhi–Gurgaon–Faridabad in the North,¹⁴ as well as upcoming areas like Sri City, Anantapur and Sanand.¹⁵

¹² "Consuming class" refers to households with annual incomes above INR 4,85,000; data from *India's Economic Geography in 2025*, a McKinsey Global Institute report, 2014

¹³ IHS Markit, Society of Indian Automobile Manufacturers

¹⁴ Automotive Component Manufacturers Association; India Brand Equity Foundation report on automobiles, <https://www.ibef.org/download/Automobiles-Report-June-2018.pdf>, 2018; Press search

¹⁵ Press search

The industry aspires to triple in size by 2026.¹⁶ An optimism pervades all vehicle categories—passenger vehicles, commercial vehicles, two-wheelers and tractors. The pace of infrastructure development (adding an average of 40 km of road per day) could support this growth.¹⁷

This exciting forecast for automotive manufacturers also implies healthy growth for auto component manufacturers. The auto component industry's turnover increased from INR 1.1 lakh cr (USD 24 bn) in FY 2009, to INR 3.5 lakh cr (USD 51.2 bn) in FY 2018.¹⁸ The industry now aspires to double its contribution to manufacturing GDP with a four-fold growth in size and a six-fold growth in exports by 2026 (Exhibit 3).¹⁹

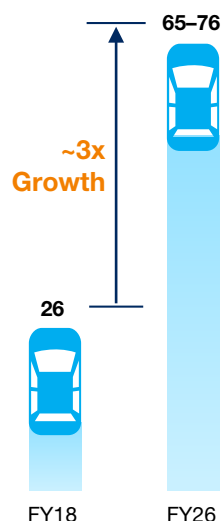
These bold aspirations, along with the trends shaping the industry, create new opportunities in the years ahead.

Exhibit 3

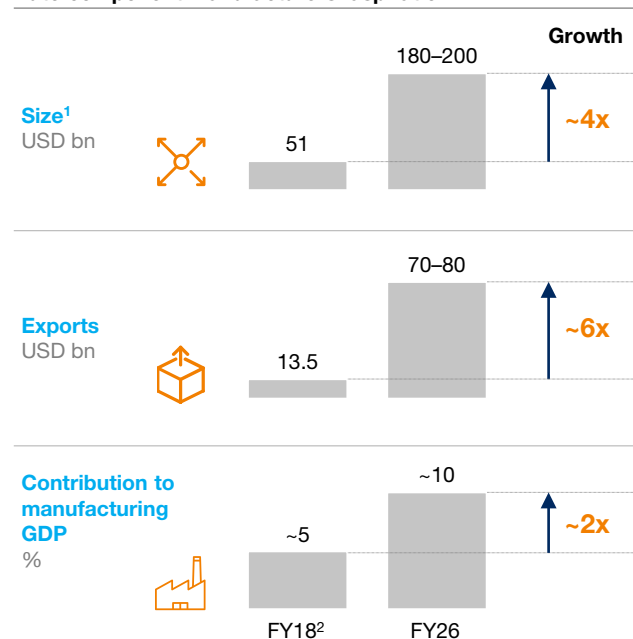
Huge aspirations ahead for automotive OEMs and component manufacturers

Auto OEMs' sales aspiration

Million units



Auto component manufacturers' aspiration



1 Includes OEM sales, aftermarket and exports

2 For contribution to manufacturing GDP, year used is 2017

SOURCE: OEM aspiration numbers drawn from Automotive Mission Plan 2026 and expert inputs to estimate three-wheeler sales, which were extrapolated at 7 percent (base case) and 10 percent (optimistic case); Society of Indian Automobile Manufacturers, IHS Markit

16 Numbers drawn from Automotive Mission Plan 2026, along with expert inputs to estimate three-wheeler sales, which were extrapolated at 7 percent (base case) and 10 percent (optimistic case)

17 <https://timesofindia.indiatimes.com/india/highway-construction-doubles-in-4-years-with-27km-a-day-in-017-18/articleshow/63601035.cms>

18 India Brand Equity Foundation report on automobiles, <https://www.ibef.org/download/Automobiles-Report-June-2018.pdf>, 2018; Automotive Component Manufacturers Association (ACMA) press conference 2018; ACMA database

19 <http://www.siamindia.com/uploads/filemanager/47automotivemissionplan.pdf>

ENGINE DIAGNOSTIC RUNNING...

23%

BATTERY 65%

SCANNING CYLINDERS



Here and now: Trends shaping the automotive industry

Multiple trends along the following four themes could shape the future of the automotive and the auto component industry:

- Constantly shifting market dynamics
- Changing OEM needs
- Technological improvements and discontinuities
- Evolving regulatory and trade environment

The interplay of these trends (Exhibit 4) could give rise to attractive opportunities for auto component manufacturers.

Exhibit 4

Multiple trends impact the auto component industry and create specific growth opportunities

Constantly shifting market dynamics		Changing OEM needs	Technological improvements & discontinuities	Evolving regulatory & trade environment
Make in India, for India and the world	The rise of the East	Changing pockets of growth	ACES gathering momentum	Emissions – BS-VI, EV, methanol, CNG, fuel cells
		Platform consolidation	Industry 4.0	
Traceability and zero defects	Volatility and forecastability	Shorter product lifecycle	Advanced materials	Safety – Braking, cabin, roll over protection
Auto component manufacturers integrating up the value chain	Evolving adjacent industries in India	Rise of electronics	Rise of new challengers from unrelated sectors	Scrappage – Lead use, reverse value chain
		Tier 1 rationalization		
Consolidation in the global industry		Tier 2 and 3 quality	Mobility as a service	Dynamic global trade policies

CONSTANTLY SHIFTING MARKET DYNAMICS

Manufacturing locales, customer demands and operating models are all evolving, creating a dynamic market for auto component manufacturers.

Make in India, for India and the world

For most major domestic and foreign OEMs across vehicle segments, India's growing localization levels indicate the industry's capability to produce a diverse portfolio (Exhibit 5). Top selling models across vehicle segments—hatchbacks, SUVs, premium sedans, commercial vehicles—have achieved 85 percent or higher localization. Market leaders in two-wheelers have started developing bikes that are 100 percent indigenous. And a very cost-sensitive segment such as tractors is at nearly 100 percent localization.²⁰

²⁰ IHS Markit; Company websites

Exhibit 5

High Tier 1 localization levels across vehicle segments

Vehicle category		Average localization in top selling models ¹	Details
Hatchbacks, compact sedans/SUVs		90–95%	- Segment leaders have achieved 95% localization - Foreign OEM launches also securing as high as 98% localization
Premium sedans		85–90%	Even smaller players have increased localization levels from ~70% to > 80% in the past ~5 years and intend to increase to ~90% in the next ~5 years
Commercial vehicles		>90%	- Home grown leaders have localization well above 90% - Premium offerings have also increased their localization from ~80% to >90% in 2015
2-wheelers		>90%	- Market leaders have started developing bikes which are 100% indigenous - Mass foreign players have also surpassed 90% localization
Tractors		>95%	Cost-sensitive segment dominated by Indian players who have localization levels close to 100%

¹ Represent more than 80 percent of sales in their respective categories (e.g., premium sedans, two-wheelers, tractors, etc.)

SOURCE: IHS Markit; Press search; Expert interviews

India is also making more and more for the world. OEM exports have seen a rise in volumes. Passenger vehicle (PV) and commercial vehicle (CV) exports grew by 25 percent from 2013–14 to 2017–18. Two-wheeler exports shot up by 40 percent during the same period.²¹ Auto component exports from India also went up by 45 percent from 2013–14 to 2017–18 (in Rupee terms).²²

The rise of the East

Asia is emerging as the growth engine for the global automotive market, backed by its cost competitiveness, rising incomes, rapid urbanization, improving infrastructure, and the scope for greater vehicle penetration in most Asian countries. A majority of global manufacturers are already increasing their capacity to meet growing demand in these markets, with big companies choosing to set up most of their new plants in Asia.²³ In 2017, 40 of the top 100 global auto suppliers were from Asia, a number that has constantly been on the rise.²⁴

²¹ Society of Indian Automobile Manufacturers

²² Automotive Component Manufacturers Association

²³ IHS Markit; Press search

²⁴ Automotive News Data Center

Traceability and zero defects

Around 2.2 mn vehicles were recalled in India between 2012 and 2016.²⁵ The number of vehicle recalls has significantly increased in recent years, leading to a growing trend of quality consciousness and renewed focus on manufacturing excellence. To mitigate the losses that inevitably accompany recalls, automotive manufacturers are adopting a strong zero-defect policy, encouraging component manufacturers who do well on the zero-defect parameter and penalizing those who do not.²⁶

In instances where products do end up having flaws that prompt a recall, traceability becomes a critical contributor in damage control. The rapid rise in volumes requires a real-time parts management system. More than ever before, vehicles need virtual identity cards at the component level.

Volatility and forecastability

The global supply chain is more connected than ever before. This amplifies the impact of any unexpected changes—from exchange rate fluctuations and price volatility to geopolitical tensions or natural disasters. These factors and their impact on the industry are difficult to forecast, adding uncertainty to an already dynamic situation. Adding to the mix are rapidly changing customer preferences and the constant need to upgrade, which are creating new paradigms within which auto makers must forecast demand.²⁷

Auto component manufacturers integrating up the value chain

In recent years, many auto component manufacturers (mostly Tier 1) have gone beyond their role as part suppliers for automotive manufacturers to enter other segments of the value chain. Many companies are moving past pure component manufacturing to operating as system integrators, such as offering electric mobility solutions, a computing platform for self-driven vehicles, a connected infotainment ecosystem, telematics solutions and smart supply chain solutions, among other things.²⁸ By 2030, the automotive value chain will see large value shift to non-traditional sub-segments, such as from the traditional vehicle base and aftermarket to EVs, advanced driver assistance systems (ADAS), data-enabled services, etc.²⁹

Evolving adjacent industries in India

Adjacent industries like aerospace, defence and agricultural machinery are evolving into a promising new market for Indian auto component manufacturers.

India's aerospace and defence capex budget could be worth USD 23 bn to 25 bn by 2025, a 60 to 75 percent growth.³⁰ The size of the component market in India for these two sectors

25 Society of Indian Automobile Manufacturers

26 <https://www.livemint.com/Companies/ENDu7ngdUSL0yd60xtC8yM/Maruti-Suzuki-cracks-down-on-suppliers-over-quality.html>

27 IHS Markit

28 Company websites, press search

29 McKinsey Center for Future Mobility

30 Defence Procurement Procedure (2016)

is estimated at USD 8 bn and USD 11 bn respectively.³¹ While most components are imported at present, the implementation of Defence Procurement Procedures (2016) is likely to boost the “Make in India” program, creating a huge opportunity for auto component manufacturers in India.

The agricultural machinery market is also expected to grow.³² The current market is restricted by the high percentage of unorganized retail, use of low-value machines for harvesting and high reliability on labour. The government’s drive to mechanize agricultural land under the Sub-Mission on Agricultural Mechanization could amplify the demand for sophisticated machinery, which in turn might prompt demand for components in sub-segments like threshers, rotavators, precision agriculture solutions and tractor linkage parts.³³

Consolidation in the global industry

Smaller companies seeking topline growth and cost synergies are struggling in the face of increasingly complex technology and business models. More and more, such companies end up merging, or are taken over by bigger companies. Analysis from 2014 suggests that the number of suppliers in India came down from nearly 30,000 in the early 1990s to barely 3,000 to 3,500 in 2014.³⁴ The momentum continues—the Indian industry witnessed 13 M&A deals in 2017, and four more in the first three months of 2018 alone.³⁵ This trend is more pronounced in the global auto components market, which saw 194 M&A deals in 2017.³⁶

CHANGING OEM NEEDS

Auto component manufacturers would need to keep pace with the changing needs of automotive OEMs, who in turn are coping with the dynamic expectations of the end customer, consolidation of platforms to reduce complexity and alterations in vehicle cost composition.

Changing pockets of growth

While traditional vehicle segments will continue to perform at their steady pace, much of the growth is expected from premium and higher-powered sub-segments (Exhibit 6). As disposable incomes grow, people seem more willing to indulge their desire to ride what they see as a better machine—perhaps by graduating from a 125-cc to a 250-cc motorcycle, or evolving from driving a two-wheeler to a four-wheeler.

A look at numbers (in 2014, 2018 and the estimate for 2021) reveals that the biggest growth is and could continue to be in luxury vehicles and SUVs among all categories of

31 Expert interviews, Defence Procurement Procedure (2016)

32 *Transforming agriculture through mechanization*, a Grant Thornton report, 2015

33 Expert interviews

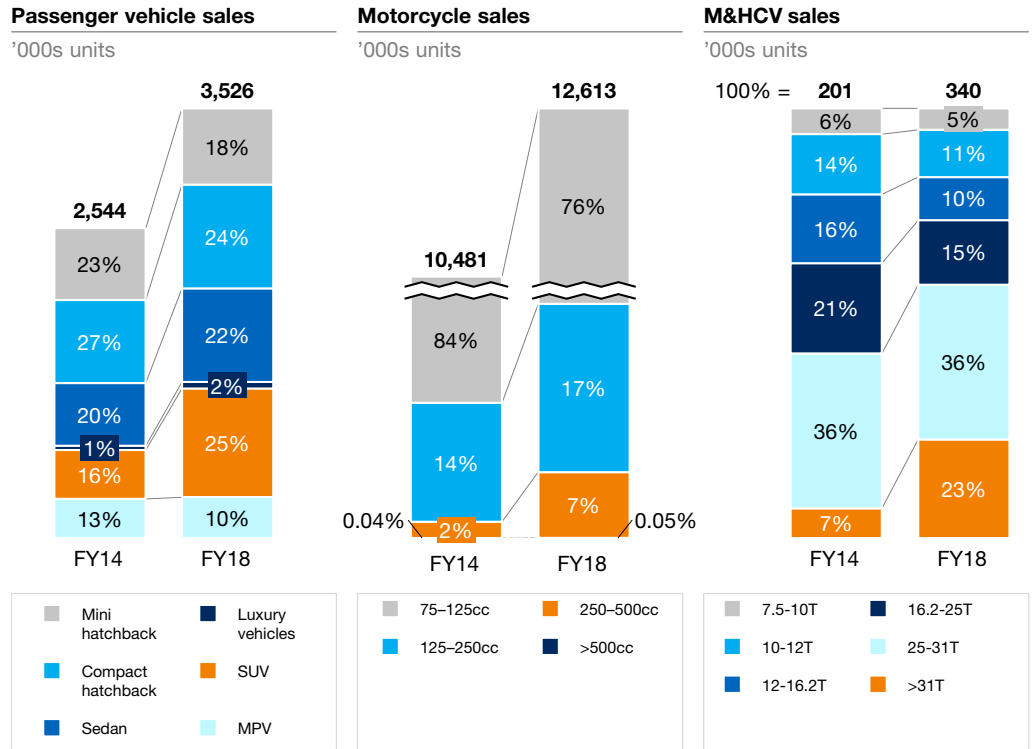
34 <https://www.thehindu.com/business/Industry/huge-opportunity-for-indian-auto-component-suppliers/article6636740.ece>

35 <https://www.livemint.com/Money/NHnMEb2CYBZ0hhg3HKSAWK/Indian-auto-component-makers-are-hungry-for-overseas-acquisi.html>

36 Thomson Reuters deal database

Exhibit 6

Demand is shifting towards premium and higher capacity vehicles



SOURCE: IHS Markit, Society of Indian Automobile Manufacturers, ICRA Research

passenger vehicles.³⁷ A similar preference emerges for higher-powered motorcycles.³⁸ In medium and heavy commercial vehicles (M&HCVs), the greatest growth is seen in sales of vehicles above 31 tons.³⁹

There is also high demand for mass-market vehicles to offer the premium and convenience features first seen on luxury cars. The pace of this commoditization has quickened, with luxury vehicle features appearing on mass vehicles in half the time as before.⁴⁰ This creates an attractive avenue for component manufacturers, as detailed in the next chapter.

Platform consolidation

OEMs have actively been trying to narrow down their vehicle platforms in recent years, doing more with less (Exhibit 7). While car production volumes have been rising, the number of vehicle platforms has fallen for most OEMs. On average, the volume per platform has gone up by around 44 percent over a five-year period.⁴¹ This means automotive manufacturers could require simpler, more versatile components that are usable across multiple platforms.

³⁷ IHS Markit

³⁸ Society of Indian Automobile Manufacturers; Expert interviews

³⁹ Society of Indian Automobile Manufacturers

⁴⁰ Company websites; Press releases

⁴¹ IHS Markit

Exhibit 7

Globally, OEMs are reducing the number of platforms

Platforms in production¹

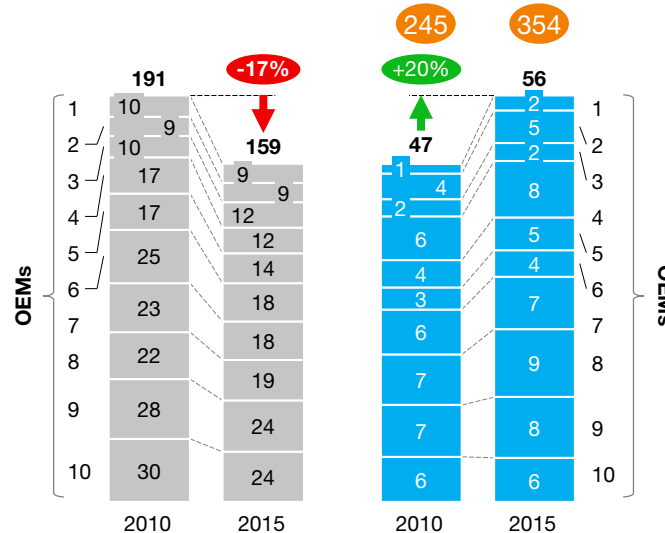
Number of platforms

Passenger car production²

Million vehicles



Avg. volume per platform (thousands)



¹ Passenger cars only

² Excl. light commercial vehicles

SOURCE: IHS Markit

▪ Average volume per platform increased by 44% over the last 5 years

▪ For individual platforms across all OEMs, the top 25 platforms (out of 550) account for 50% of total production

Shorter product lifecycle

Product lifecycles for many car manufacturers have been shrinking. In Germany, for example, two leading car manufacturers saw their product lifecycles drop between 2002 and 2015, one by 19 percent and another by 10 percent.⁴²

In India, as tastes shift and evolve, and new entrants join the ranks of consumers, vehicle owners scout for fresh options more frequently than before, eager to upgrade or change their set of wheels. This trend could prod OEMs to offer newer, more varied options, adding complexity to their supply chain and production processes. The number of new model launches in the passenger vehicle segment in India has more than doubled—from 18 in 2008 to 40 in 2018.⁴³ Similarly, two-wheeler manufacturers are planning to launch almost 50 vehicles in fiscal year 2019.⁴⁴

Rise of electronics

The world is seeing electronics permeate all areas. The automotive industry is likely to be no different. The current penetration of electronics in the automotive market is low in India—due to limited scale, imports address around 65 to 70 percent of OEM demand in the country.⁴⁵ But by 2030, auto electronics content is expected to contribute nearly 45 percent

⁴² IHS driven by Polk

⁴³ IHS Markit

⁴⁴ <https://www.zigwheels.com/upcoming-bikes>

⁴⁵ <https://auto.economictimes.indiatimes.com/autologue/indian-auto-electronics-industry-gearing-up-to-accelerate/1001>

of total automobile cost in India.⁴⁶ Rapidly evolving emissions and safety regulations as well as technological disruptions such as connectivity and e-mobility could underpin the demand for electronics at an OEM and customer level. For instance, it is expected that the implementation of BS-VI standards will lead to a spike in demand for components like catalytic converters, electronic fuel injection systems, oxygen sensors and intelligent battery sensors.⁴⁷

Tier 1 rationalization

OEMs around the world have been gravitating for a while towards a model of close collaboration with a small, informal group of auto component suppliers that grow and expand a business together. For instance, in 2013, a leading global OEM chose to foster fewer but closer partnerships, and so it cut down the number of its suppliers. It took this decisive step to reduce operational complexity, manage cost, improve quality and develop new products faster than before.⁴⁸

Tier 2 and 3 quality

The World Bank has highlighted that only 47 percent of automotive companies in India have internationally recognized quality certification, compared to 83 percent in China.⁴⁹ The current production systems of many Tier 2 and 3 suppliers in India are not designed to ensure defect traceability and debugging.⁵⁰ The proliferation of Tier 2 and 3 auto component suppliers to save costs without an improvement in their capabilities could thus pose an enormous risk.

TECHNOLOGICAL IMPROVEMENTS AND DISCONTINUITIES

The industry scenario is starting to evolve beyond recognition on the back of technological changes and disruptions. These trends could change revenue pools, trigger new competition and invite new forms of cooperation.

ACES gathering momentum

Autonomous vehicles, Connected vehicles, Electrification and Shared Mobility (ACES) are very real, disruptive and technology-driven trends that could change the future of the mobility industry. India already has more than 50 startups working on innovative ACES technologies across cars, two-wheelers and commercial vehicles.⁵¹ These technologies are gaining ground due to increasing customer acceptance, stricter emission regulations, lower battery costs and more widely available charging infrastructure.⁵²

46 *Performance and disruption: The automotive supplier landscape 2015*, a McKinsey & Company study, 2015

47 <https://auto.economictimes.indiatimes.com/news/industry/challenges-and-opportunities-for-auto-industry-with-bs-vi-norms/61217044>

48 <https://www.bloomberg.com/news/articles/2013-10-21/ford-wants-to-pare-number-of-suppliers-by-40-executive-says>

49 <https://blogs.worldbank.org/psd/what-s-holding-back-india-s-automotive-sector>

50 Expert interviews

51 Press search

52 *The future of mobility in India: Challenges and opportunities for the auto component industry*, a McKinsey & Company report, 2017

By 2030, various estimates expect that the share of EVs in global markets could be upwards of 30 percent of all new vehicle sales, edging into the market share of traditional vehicles.⁵³ By that time, shared mobility and connected vehicles could contribute USD 1,575 bn to automotive revenues, a critical chunk of overall revenues of USD 6,600 bn.⁵⁴ A leading shared mobility company took more than eight years to complete its first 5 bn rides, and then in just over one year, doubled the number of rides.⁵⁵ In India, shared mobility providers saw a four-fold rise in ride volumes between 2015 and 2016.⁵⁶ With EVs likely to make these services cheaper, the figures are only expected to increase.

Every component will feel the effect of these trends differently, and to varying degrees. For example, electrification could over time slow down the demand for internal combustion engine components, while fueling the rise of electric motors, battery cells and battery systems (Exhibit 8).

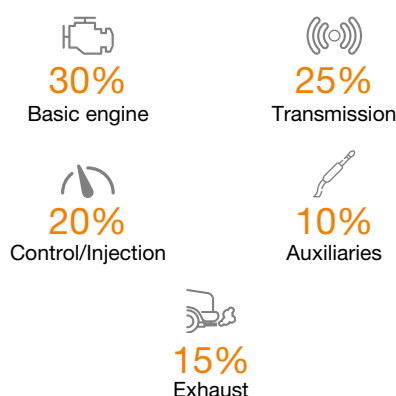
Exhibit 8

The value-add composition of vehicles could change

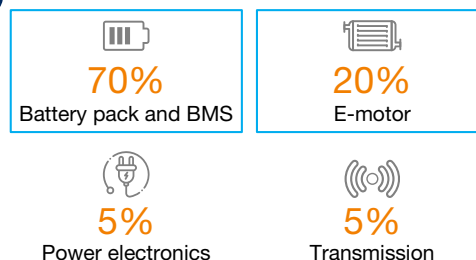
Share of powertrain cost in passenger vehicle

Key drivers of shift % Share of powertrain cost

ICE powertrain, 2010



BEV powertrain, 2030E



SOURCE: McKinsey Center for Future Mobility

The evolution of autonomous vehicles is defined between levels L1 and L5 based on the extent of autonomy.⁵⁷ In India, ADAS (supported by technologies ranging from L1 to L3) could see gradual adoption, such as through features like adaptive cruise control, parking assistance, lane assist and driver monitoring system, etc.⁵⁸

53 The International Council on Clean Transportation (ICCT), McKinsey Sustainable Mobility Initiative

54 McKinsey Center for Future Mobility

55 <http://www.thedrive.com/tech/22415/uber-drivers-have-completed-more-than-10-billion-ride-hailing-trips>

56 <https://www.livemint.com/Companies/bjNzZDHCO25e0OZhj3okIJ/Ola-Uber-see-rides-rise-fourfold-in-2016-report.html>

57 McKinsey Center for Future Mobility: L1 – Driver assistance (steering assistance), L2 – Partial automation (driving environment assistance), L3 – Conditional automation (automated driving system with human intervention, when needed), L4 – L3 with partial automation when intervention is needed, L5 – Full automation

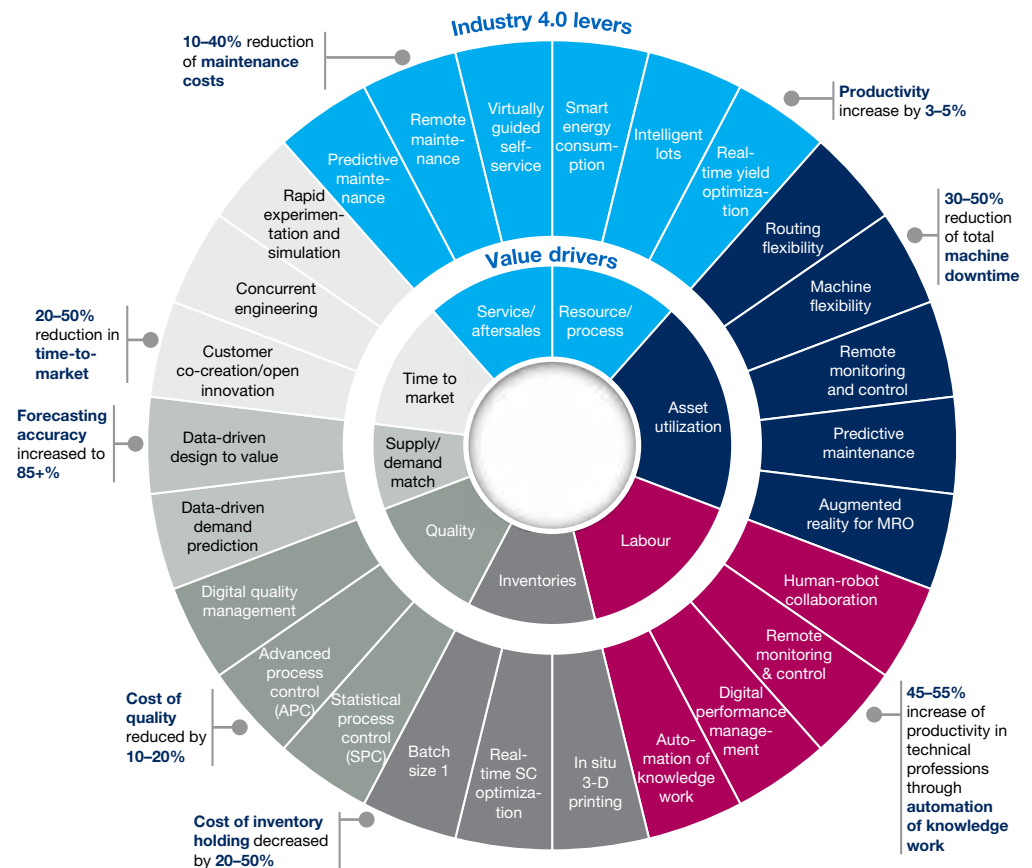
58 Expert interviews

Industry 4.0

Industry 4.0—the innovation of processes, digital manufacturing and automated distribution centres—could disrupt the industrial value chain and push companies to rethink the way they do business (Exhibit 9).

Exhibit 9

Changes possible across the value chain with Industry 4.0



SOURCE: McKinsey Industry 4.0 Knowledge Investment Project

These shifts could also modify the typical job profiles required by auto component manufacturers. For example, instead of a manual worker in the production line, companies might need an exception handler or an operator in an automated workflow; the role of a supply chain planner could evolve from merely planning the logistics of supply in a segmented approach, to someone owning a fully integrated supply chain, from order to delivery.

Advanced materials

The weight and engine power of vehicles have been on the rise, prompting a greater demand for stronger components across body frame, brake and suspension. In this context, the auto industry is seeing an increasing application of advanced materials for lightweighting materials such as high-strength steel (HSS), aluminum, magnesium and carbon fiber.

Lightweighting gains particular importance in the case of EVs as it directly reduces the power demand on the battery, increases battery range, reduces the charging cycles and enhances battery life. This is pushing up demand for aluminum and HSS. By 2030, the share of HSS in the material costs of a vehicle is expected to double.

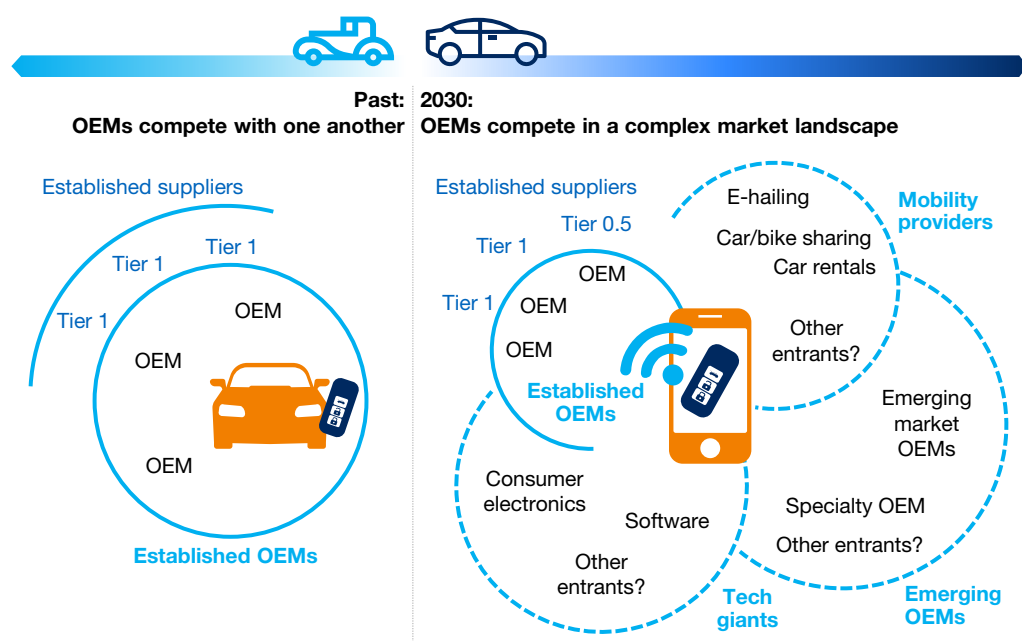
Magnesium and carbon fiber are also lightweight materials, but they are expensive, which would limit their use to niche applications, e.g., performance vehicles where the price premium justifies the tradeoff.

Rise of new challengers from unrelated sectors

Around 95 percent of disclosed investments in companies focusing on disruptive technologies stem from non-automotive players.⁵⁹ As processes and revenue sources change, incumbents could be faced with new challengers from unrelated sectors (Exhibit 10). For example, a leading retail website now has a similar sales-to-traffic ratio for auto parts as it does for books and toys. Its department for auto parts sales employs nearly four times as many people today as it did earlier in this decade.

Exhibit 10

The automotive marketplace is changing



59 The automotive revolution is speeding up, McKinsey Center for Future Mobility, October 2017

Mobility as a service

The automotive value chain is likely to see large value shift to non-traditional segments like transportation and data services.⁶⁰ This might accompany the increased uptake of shared mobility due to its greater convenience. As vehicles begin to be offered as a service rather than a personal ownership experience, their design could be oriented more towards the passengers' comfort and convenience, than for drivers.

EVOLVING REGULATORY AND TRADE ENVIRONMENT

The world beyond the industry also contributes an element of dynamism, with changing macro realities due to regulatory and policy shifts that are beyond the control of any one company or industry.

Evolving and increasingly stringent regulations could prompt changing expectations from auto component manufacturers, who might need to rethink their component production to comply with regulatory and other guidelines, such as:

- Emissions: Enforcement of BS-VI norms by 2020, push towards EV, discussions on methanol, CNG and potentially even fuel cells
- Safety: Mandatory ABS on cars, buses and two-wheelers, cabin safety, and roll over protection systems
- Scrappage: Policy mandating the scrappage of old trucks impacting lead use and reverse value chain

Dynamic global trade policies add to the flux. International trade is often governed by factors beyond the control of individual companies or even of industries. The rise of tariff and non-tariff protection (stringent testing, quality related barriers), the existence or lack of free trade agreements with certain countries, and other government-to-government concerns could impact the business performance of these companies.

All these trends together are shaping a set of opportunities for auto component manufacturers. Zeroing in on specific opportunities could be critical for companies as they prepare their future strategies and production pipelines, and help to allocate people and assets to the most important priorities.

60 Analysis of market research conducted in Delhi and Hyderabad with a sample size of 600





The opportunities ahead: Potential focus areas for auto component manufacturers

Keeping pace with the automotive industry, India's auto component industry has been flourishing. In under a decade, turnover more than tripled—it grew from around INR 1.1 lakh cr (USD 24 bn) in FY 2009 to INR 3.5 lakh cr (USD 51 bn) in FY 2018. Exports in 2018 were worth INR 91,000 cr (USD 13.5 bn), with most products headed to developed markets, especially North America and the European Union.⁶¹

While these are impressive numbers, India still has only a 3 percent share of the USD 1,690 bn global industry today.⁶² As the industry forges ahead to achieve its ambitious goals—four-fold growth in size by 2026, six-fold growth in exports and double the contribution to manufacturing GDP—there are tremendous opportunities to explore (Exhibit 11).⁶³ It is critical that each auto component player focuses on the opportunities most suited for them.

Exhibit 11

10 opportunities emerge for the auto component industry

- 1 Pursue export opportunities aggressively.
 - 2 Enhance import substitution.
 - 3 Offer premium features at “Indian costs” more rapidly than before.
 - 4 Focus on component categories that will contribute more to vehicle costs in the future.
 - 5 Expand aftermarket offerings to capture value from existing vehicle parc and aftermarket exports.
 - 6 Offer “rising star” components which could take off in the long run due to an increase in EV sales.
 - 7 Offer new or modified features that will be in demand with increase in shared mobility penetration.
 - 8 Develop data-enabled services and solutions.
 - 9 Form partnerships and ecosystems to create and capture value.
 - 10 Expand portfolio to serve adjacent industries.
-

61 India Brand Equity Foundation report on automobiles, <https://www.ibef.org/download/Automobiles-Report-June-2018.pdf>, 2018; Automotive Component Manufacturers Association (ACMA) press conference 2018; ACMA database

62 IHS Markit, ICRA Research

63 Automotive Mission Plan 2026

PURSUE EXPORT OPPORTUNITIES AGGRESSIVELY

The Indian automotive OEM industry has been steadily growing its exports. Passenger and commercial vehicle exports in terms of units were 25 percent higher in FY 2018 compared to FY 2014; for two-wheelers this number was 40 percent.⁶⁴ While the auto component industry has also grown its exports, scope remains for more. Despite exporting to 160 countries, India's share of global exports is only 3.5 percent or USD 13.5 bn of USD 386 bn.⁶⁵ Reasons for the low share include the following:

- Gaps in tolerances, fit and finish
- An RFQ responder mindset rather than a business-development mindset
- Gaps in quality of raw material
- Gaps in technology and cost-competitiveness (e.g., electronics)
- Low flexibility to change and innovate

Despite these challenges, potential is ripe to actively grow exports. Three factors help to build conviction in this opportunity.

First, the highly localized domestic market across vehicle segments establishes that the auto component industry's core capabilities are in place to manufacture a variety of components in India. Localization levels are upwards of 95 percent in two-wheelers and tractors, and around 90 percent in case of commercial vehicles. Mass market cars, including some of the latest launches, have achieved close to 90 percent localization.⁶⁶

Second, despite high component imports across regions, India's contribution to the top 15 imported components for the US, EU and China remained minuscule, ranging from 0.7 to 1 percent, suggesting room for growth (Exhibit 12). For example, at USD 1.2 bn, India contributes only a sliver of the US's total imports of USD 124 bn.⁶⁷ This could change, given that India does manufacture many of the top import components in these import markets.

And third, the gap in regulations between India and developed markets, particularly on emissions but also in terms of safety standards, has been steadily narrowing. This creates several more opportunities for components to be exported to the developed markets. For instance, the enforcement of Bharat Stage VI emission norms in 2020 will mean that the same powertrain specifications are required in India and developed markets (Exhibit 13).⁶⁸

64 Society of Indian Automobile Manufacturers

65 Global data taken from UN Comtrade; India numbers from ACMA data (FY 2018)

66 Press search; Expert interviews

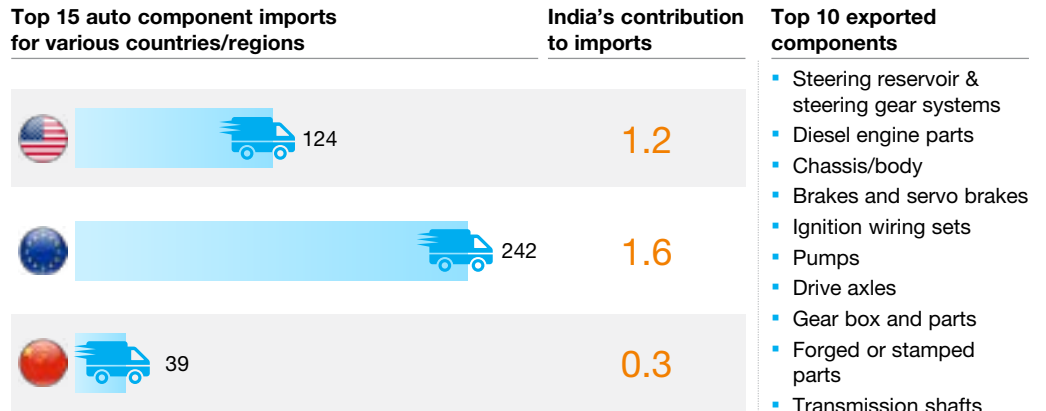
67 Global data taken from UN Comtrade; India numbers from ACMA data (FY 2018)

68 Dieselnets database; Automotive Research Association of India

Exhibit 12

India's contribution to auto component imports of big importing markets

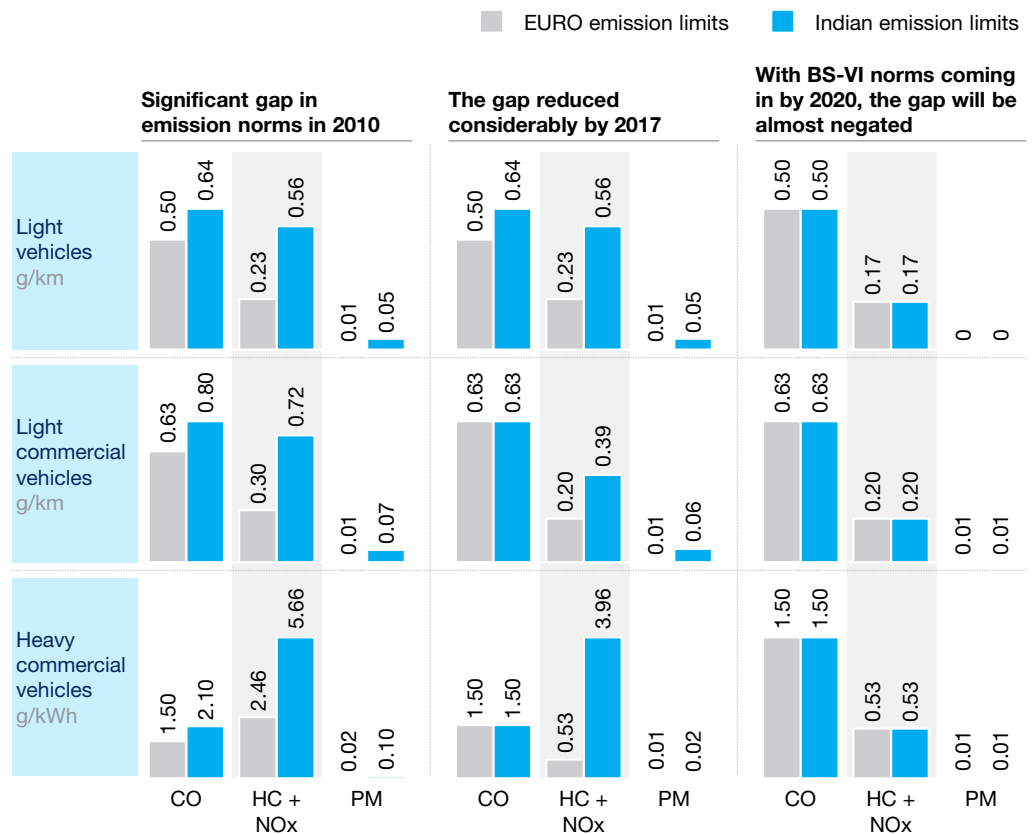
USD bn, CY 2017



SOURCE: UN Comtrade

Exhibit 13

Closing gap on emission norms creates export opportunities for Indian auto industry



SOURCE: Dieselnet database, Automotive Research Association of India

ENHANCE IMPORT SUBSTITUTION

India's imports of auto components were valued at USD 14 bn in 2016.⁶⁹ According to the Automotive Mission Plan, this figure could rise to nearly USD 23 bn to 28 bn by 2026 (Exhibit 14). The reasons for high and growing imports are similar to those for India's low exports—gaps on fit and finish, raw material, technology, cost-competitiveness, etc.

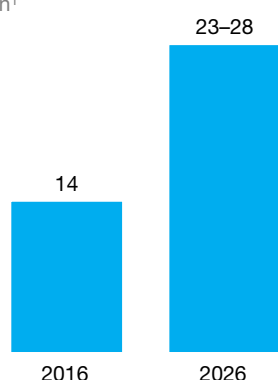
The rising thrust on Make in India and growing localization can support manufacturers to develop more parts on Indian soil. It could also help to increase the localization of premium features across segments, since these are a new source of growth.

Exhibit 14

The expected rise in auto component imports to India indicates scope for import substitution

Indian imports of auto components

USD bn¹



Top 10 components imported to India²

- Steering reservoir & steering gear systems
- Gear boxes
- Electric motors parts
- Gears parts
- Lithium-ion
- Body and frame parts
- Motorcycle parts (inner tubes, axles, clamps, radiators)
- Spark ignition engines
- Steering wheels & columns
- Engines (>250cc)

¹ Calculated using exchange rate of USD 1 = INR 65

² Import data at Harmonized System code 8 digit level

SOURCE: UN Comtrade; Ministry of Commerce & Industry; Automotive Component Manufacturers Association



69 Automotive Component Manufacturers Association (ACMA) press conference 2018; ACMA database

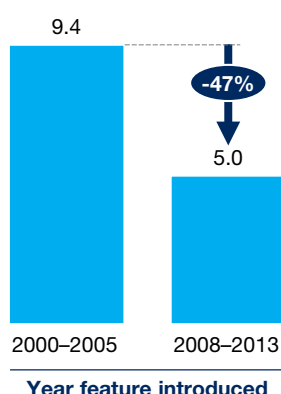
OFFER PREMIUM FEATURES AT “INDIAN COSTS” MORE RAPIDLY THAN BEFORE

The trend of faster commoditization of premium features is a clear indicator of customer demand. Premium features now appear on mass-segment vehicles in half the time it took earlier (Exhibit 15). For example, in 2005, a high-end vehicle launched on-steering controls, which an Indian OEM offered in its mass-segment four-wheeler only in 2014—nearly a decade later. But this process has sped up over time, so features like Bluetooth connectivity or keyless entry appeared on one of India’s commonly driven mass vehicles only five years after first hitting the market on luxury vehicles. Many premium features are even travelling across segments, such as daytime running lights on commercial vehicles, ABS and Bluetooth connectivity on two-wheelers, etc.⁷⁰

Exhibit 15

Premium features are seeing faster commoditization across segments

Average number of years for mass market adoption of premium features¹



Premium feature commoditization across segments

- 
 - Bluetooth connectivity
 - Keyless entry
 - Daytime running lights
 - Gesture control infotainment system
 - EBD module
 - Electronic seat adjustment system
- 
 - Climate control system
 - On-steering control
 - Daytime running lights (DRLs)
 - Cruise control
- 
 - ABS
 - Bluetooth connectivity
 - Digital instrument cluster

¹ Passenger vehicle analysis

SOURCE: Company websites; Press releases

Further speeding up the appearance of premium features on mass-segment vehicles, especially on the strength of the famed Indian frugal innovation, could help to cut the time to market and costs for such offerings. It is important that auto component manufacturers anticipate the mass-market potential of such premium features—rapidly adding these to their pipeline could help them tap the high and growing demand for such features.

⁷⁰ Company websites; Press releases

FOCUS ON COMPONENT CATEGORIES THAT WOULD CONTRIBUTE MORE TO VEHICLE COSTS IN THE FUTURE

A comparison of the top 10 component manufacturers indicates that while Indian and global auto component manufacturers play in a similar number of component categories, global companies offer as many as 50 percent more sub-categories than Indian players (27 for global, 18 for Indian).⁷¹ Indian manufacturers could expand their portfolio to match global offerings, and in doing so, it would make sense to focus on component categories that might contribute more to the cost per vehicle (CPV) in coming years.

The cost composition of vehicles across various segments is changing—influenced by new technology, materials, customer expectations and automotive megatrends. For instance, a breakdown of the cost composition of light vehicles indicates that the greatest contributors to future vehicle costs are four categories: Electricals & Electronics (E&E), Braking, Exhaust and Passenger restraint. This is also true for two-wheelers, where Braking (e.g., because of ABS), Exhaust treatment and E&E (e.g., because of digital instrument clusters) could contribute more to vehicle costs. For commercial vehicles as well, exhaust treatment and telematics could contribute more to vehicle costs. For farm equipment, roll over protection systems, power transmission systems and pneumatic brakes are expected to contribute more to vehicle costs.⁷²

EXPAND AFTERMARKET OFFERINGS TO CAPTURE VALUE FROM EXISTING VEHICLE PARC AND AFTERMARKET EXPORTS

The global automotive aftermarket is expected to grow at around 3.5 percent per annum, to USD 1.4 tn by 2030.⁷³ Given the high vehicle parc in India (typically 9x to 13x of latest year vehicle sales), and the many attractive new features across segments (premium accessories or new technologies), auto component manufacturers could tap a ready market by producing such components (Exhibit 16). The penetration of many new features, such as parking cameras/sensors, keyless entry, etc. is only around 10 to 20 percent in new vehicles, which means there is plenty of scope to offer such components.⁷⁴

Several disruptions make the auto aftermarket an attractive opportunity: OEMs are creating their own brands for the aftermarket, there is a growing global trend of distributor consolidation, multiple platforms are emerging for online parts sales, and customer preferences are changing to tailored and premium service offerings.

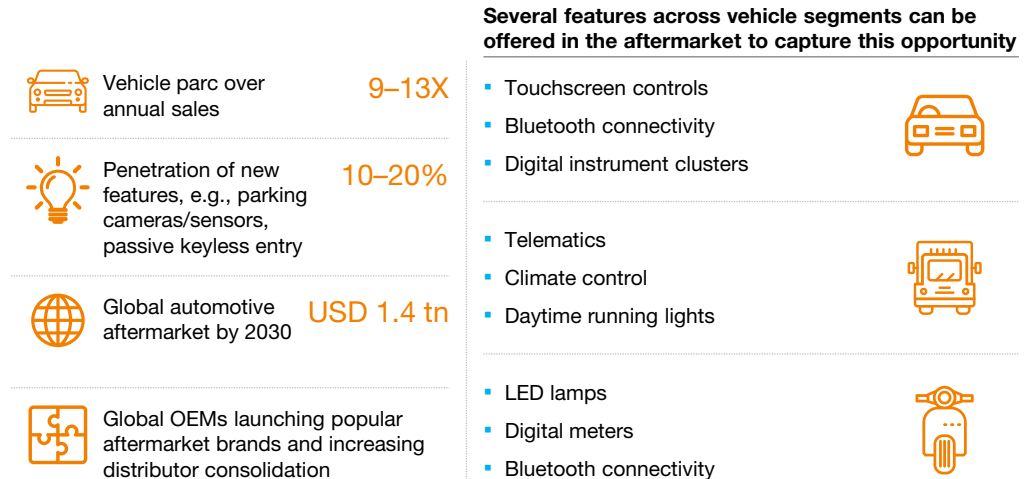
71 Company websites; Press releases

72 IHS Markit; World Industry Survey; Merrill Lynch; UBS, Jefferies; Expert interviews

73 McKinsey Center for Future Mobility

74 Society of Indian Automobile Manufacturers

Companies could expand aftermarket offerings to capture value from existing vehicle parc and aftermarket exports



SOURCE: Society of Indian Automobile Manufacturers

OFFER “RISING STAR” COMPONENTS WHICH COULD TAKE OFF IN THE LONG RUN DUE TO AN INCREASE IN EV SALES

Industry experts in India believe that EVs could grow by 2030, especially for public buses, motorcycles (under 125 cc), scooters, three-wheelers and light commercial vehicles, which are likely to see at least 25 percent penetration.⁷⁵ Various forecasts estimate that global EV penetration is likely to go up as well, at upwards of 30 percent penetration for several vehicle segments.⁷⁶ This could result in some “rising star” components, such as batteries and battery materials, electric motors, power electronics (Exhibit 17), the demand for which is certain to spike with EV penetration. Auto component manufacturers could benefit from the opportunity to produce and supply some of these components.

While EV penetration is going to be on an upward trajectory,⁷⁷ it is important to note that the ICE market is still going to grow—it could double from current size in 2026, based on projections from the Automotive Mission Plan 2026, even after accounting for around 30 percent EV penetration. However, increasing global EV penetration will pressure the prices of ICE components as production capacity is left idle, re-purposed or shut down. This could lead to either the dumping of ICE vehicle components in Indian markets or a shift of demand for ICE vehicle components to India.

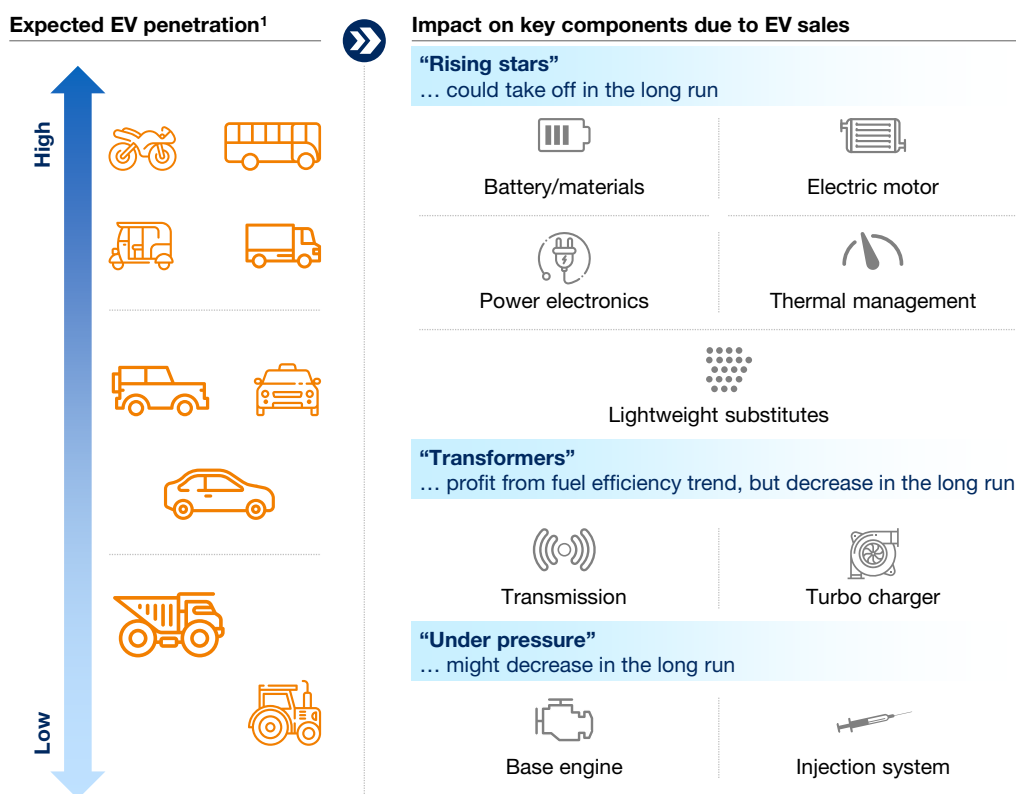
⁷⁵ Expected penetration of battery electric vehicles (BEV), based on the mode of responses from a survey of around 30 industry experts, McKinsey Center for Future Mobility India Roundtable, 2017

⁷⁶ <https://auto.economictimes.indiatimes.com/news/industry/electric-vehicle-can-see-30-40-penetration-by-2030-siam/60468095>; <https://www.financialexpress.com/auto/car-news/government-finally-wakes-up-sets-a-realistic-goal-of-30-electric-vehicles-by-2030-from-existing-100-target/1091075/>

⁷⁷ IHS Markit

Exhibit 17

Offer “rising star” components which would take off in the long run due to an increase in EV sales



¹ Expected penetration of battery electric vehicles (BEV), based on the mode of responses from a survey of around 30 industry experts, McKinsey Center for Future Mobility India Roundtable, 2017

SOURCE: IHS Markit; Company websites

OFFER NEW OR MODIFIED FEATURES THAT COULD BE IN DEMAND WITH INCREASE IN SHARED MOBILITY PENETRATION

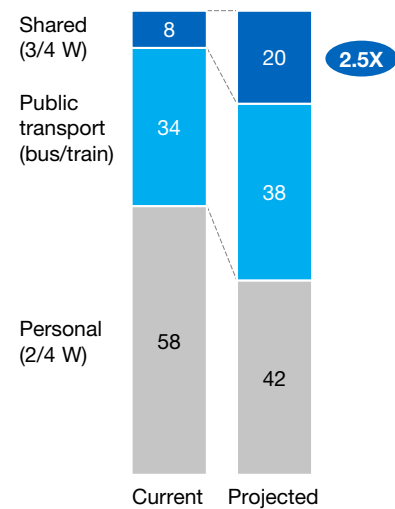
If the cost of shared mobility services drops, urban travelers could show a marked preference for shared transport. Vehicles purpose-built for shared mobility could then prove more attractive for purchasers of the vehicles and the services (Exhibit 18). Auto component manufacturers could extend their focus to offering the new or modified features needed for such vehicles—flexible room usage concepts and seating, different car sizes, low-maintenance interiors, electrification, etc. Auto component manufacturers might also find new avenues to the aftermarket for this segment through tie-ups with shared mobility service providers.

Exhibit 18

The rise of shared mobility could create demand for a set of new and modified features

2.5x shared mobility penetration when offered at ~30% discount

Share of transport modes, %



Faster adoption of shared mobility services will lead to greater demand for purpose-built vehicles



Different car sizes with flexible seating,
e.g., rotating swivel seats



Enhanced features for the back seat
e.g., info- and entertainment system



Fewer features at the front,
e.g., minimalistic dashboard with only essential features



Low maintenance interior
e.g., velour for seating



Highly flexible seating arrangement
e.g., collapsible seats

SOURCE: Market research in Delhi and Hyderabad with a sample size of 600

DEVELOP DATA-ENABLED SERVICES AND SOLUTIONS

As digital technologies penetrate all industries, companies that excel at “big data” could gain a strong competitive advantage. This would hold true for auto component manufacturers as well. A modern connected vehicle has on average 40 microprocessors and generates 25 GB of data per hour.⁷⁸ Auto component manufacturers could collect customer, vehicle and machine data to build deep consumer insights and develop new use cases.⁷⁹ For example, they could look at possible offerings like:

- On-board diagnostics for end-customer convenience (smartphone-based tracking, maintenance, etc.)
- Using vehicle/component performance data to customize vehicles and improve R&D/application engineering through understanding of duty cycles
- Plant machine data for performance improvement (OEE, MTBF, etc.)
- Advanced data management for process improvement (e.g., weight/dimension tolerance)

⁷⁸ <https://qz.com/344466/connected-cars-will-send-25-gigabytes-of-data-to-the-cloud-every-hour/>

⁷⁹ Expert interviews

These could be vital inputs in fine-tuning operations, building customer leads, and boosting sales and predictive maintenance. Such insights might be equally useful to penetrate the aftermarket segment.

FORM PARTNERSHIPS AND ECOSYSTEMS TO CREATE AND CAPTURE VALUE

The arrival on the scene of many companies, often from unrelated sectors, could require auto component manufacturers to reckon with a new set of “challengers”, seeing them as potential partners or as collaborators in an evolving industry. The nature of these partnerships could vary, with the most common archetypes being co-creating new data infrastructure platforms, co-creating specific technologies and co-creating new business models and consumer offerings (Exhibit 19). Examples of such partnerships can be found in India and worldwide, such as the creation of an end-to-end connected vehicle platform, co-creating an EV battery plant, and collaboration to tap an underutilized manufacturing base.

Exhibit 19

New partnership archetypes emerge in a dynamic industry

Type of partnership	Examples			
Co-creating new data infrastructure and platforms		End-to-end connected vehicle platform 	Co-creating EV battery plant 	Integrate in-vehicle software and systems data 
Co-creating specific technologies		Crowdsourced mapping system 	Better user experience through a connected infotainment ecosystem 	Introducing ADAS solutions for HCVs 
Co-creating new business models and consumer offerings		Co-developing entry-level premium motorcycles for emerging markets 	Providing connectivity features on mainstream, mass-market vehicles at affordable prices 	Collaboration to tap underutilized manufacturing base 

SOURCE: McKinsey Center for Future Mobility; Press search

What is important to note is the urgency of forming such partnerships. The ecosystem is evolving very rapidly and auto component makers aspiring to have a share of the new products and services market would do well to enter such partnerships early on.

EXPAND PORTFOLIO TO SERVE ADJACENT INDUSTRIES

As mentioned earlier, adjacent sectors like aerospace, defence and agricultural machinery offer an exciting new opportunity for auto component manufacturers. Aerospace holds clear opportunities for forged and machined components for engines, airframes and mechanical systems like landing gear, brakes and hydraulics. Similarly, for the defence industry, auto component manufacturers could operate as system suppliers to integrators or as Tier 2 suppliers to Tier 1 companies which manufacture mechanical components like hulls, turrets, engines, gearboxes, etc. They might also develop components for testing equipment and electronics. The agricultural machinery industry offers scope to develop components for sub-segments like implements, threshers and rotavators, which are expected to see a boost given the government thrust on farm mechanization.

Component manufacturers now need to think about **how** they could move ahead to capture the inherent potential in these tremendous opportunities.





The change within: How auto component manufacturers could capture opportunities

Auto component manufacturers targeting the many opportunities ahead could benefit from a pause to introspect. Realizing the potential is conditional on companywide dedication to change—taking stock of the way they work and identifying what they could do differently. Four overarching focus areas could help organizations to move towards rapid growth and global recognition.

- Strategize to win
- Revamp leadership and talent
- Reset culture and mindset
- Achieve operational excellence

STRATEGIZE TO WIN

Successfully tapping the many opportunities laid out in the previous chapter depends on the company's willingness to change. The starting point for this is a targeted strategy, rigorously executed, to capture these opportunities. This means a conspicuous shift in how the company thinks about its products, pricing, channel, people and other dimensions, as well as in the way it allocates resources and capital.

Four suggestions for building a winning strategy are as follows:

Develop a programmatic partnerships and M&A cell to conduct due diligence and ensure smooth integration

For many growing companies, merging with or acquiring a new entity can seem like a logical step up. However, the run-up to the partnership/merger as well as the immediate aftermath need to be carefully managed—a criterion that often gets overlooked. Companies could set up these capabilities to ensure due diligence on potential acquisitions and plan for a seamless integration at every step. Such a cell could first identify the potential areas/functions/capabilities for which they require partnerships/mergers and acquisitions (M&A). Next, it could create a systematic way of identifying the target and quantifying and capturing synergies to derive maximum value. And finally, it could explore boutique bankers and local advisors to help in the deal. Consciously tackling these steps could pre-empt the unnecessary challenges emerging from a poorly thought-through M&A or partnership move.

Identify portfolio avenues

As the sources of growth and revenue shift, auto component manufacturers could find additional opportunities in products as well as services. Companies might benefit from setting up a systematic process to identify possible new entrants to the portfolio based on future growth/profits, ability to build capabilities, investments needed and leadership/talent. These new avenues need not just be in products and services, but might lie in channels (e.g., focusing on B2B2C and B2C), geographies or adjacent industries. As companies progress towards these, they would need to align on the pace of change, the big milestones on the journey ahead, as well as the triggers (or important junctures) at which they might pause and reassess the direction and priorities.

Govern performance via thorough strategy execution reviews

Once the strategic goals and milestones are identified, it will also be important to assess performance by monitoring their execution and achievement. Most auto component manufacturers run very thorough business reviews, and they could gain from overseeing the successful execution of strategy with equal attention and diligence. The acid test of this rigour is the frequency of review and top management bandwidth dedicated to long-term strategy execution versus quarterly and annual results.

Specify and commit to export and aftermarket targets

Auto component manufacturers could effectively ensure that exports and the aftermarket are focus areas for growth by setting down granular targets on size and market share, by product, by geography, or by channel. They could commit to the strategy and accordingly bring about changes in talent and resource allocation. To get the ball rolling, companies could proactively select the distributors with whom they want to start and develop a winning value proposition for them.

REVAMP LEADERSHIP AND TALENT

As the auto component manufacturing industry evolves, the nature of leadership and talent necessary for success will also change. Indian companies could actively overhaul their leadership and talent approach to be future ready.

Identify and develop next-gen leaders early on

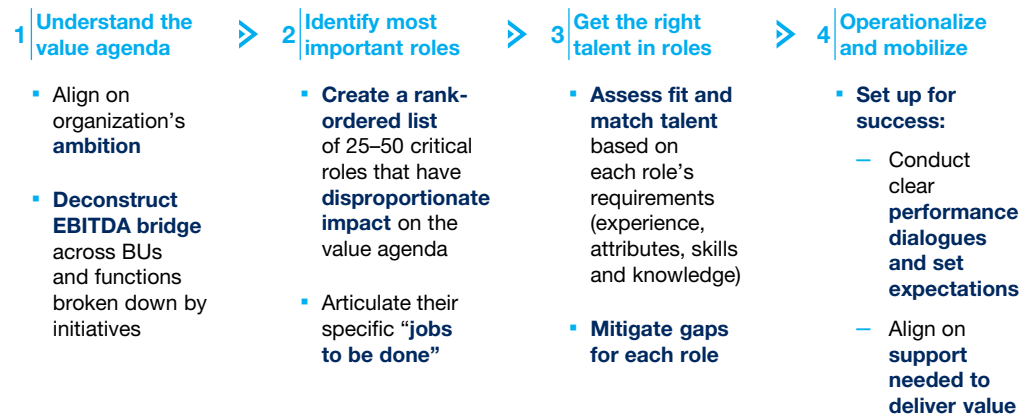
The next-gen of leaders could benefit from embracing the inevitable disruptions in the future, and accommodating multiple perspectives and possibilities. The present leadership could keep an eye out for the most promising potential leaders and groom them for success from an early stage, leading by example and role-modelling appropriate leadership behaviour and actions.

It will also be important to nurture in these next-gen leaders a more holistic vision for discontinuities. For long-term success, it is critical that leadership talent is mapped to value, with the best people taking responsibility for the maximum value (Exhibit 20). This might help the organization to focus on the select roles that deliver a large part of the value agenda.

Actively acquire or develop the core and technical skills necessary for the future

Auto component manufacturers need different and new skills to manage an increasingly complex production process. Enhancing core skills is important to remain relevant with evolving technologies and changing demands. Such skills could include electronics, mechatronics and calibration, advanced materials, and additive manufacturing, to name a few. At the same time, investing in the emerging skills is critical to prepare for disruptions. The technical skillset could expand to include a more comprehensive knowledge of software, big data and digital and analytics as well as data management capabilities—all powerful tools for building the vehicles of the future.

Key steps in talent to value



Linking talent to value should occur as frequently as strategic imperatives change – strategy is only theoretical without the talent to execute

Build best-in-class management skills

With the industry scaling up and expanding, there would be a need to efficiently manage a greater number of key accounts, to enhance project and performance management, and focus on improving supply quality from Tier 2 suppliers.

Key account management has a direct impact on existing businesses—it can help to manage relationships more effectively and enhance share of wallet. Project management is required to ensure timely delivery, while stakeholder management and performance management systems and tools are crucial for delivering results and better talent management. Managing Tier 2 quality also emerges as an important focus area.

Develop local teams globally

Local leadership and talent in geographies of interest is central to capturing the export opportunity. These could be on-ground business development teams in new geographies who help to open the doors to new opportunities. They could nurture and sustain relationships with potential business clients or partners, and champion the auto component manufacturing company with which they are affiliated. Their local presence could be a valuable asset in communicating long-term interest and commitment to the geography, besides enabling a timely response on delivery and customer concerns.

RESET CULTURE AND MINDSET

Adapting to a rapidly evolving industry with shifting market dynamics means embracing new ways of working with an open mind, and institutionalizing such flexibility in the organizational culture. Auto component manufacturers could focus on seven action areas (Exhibit 21) that effect a change in culture and mindset.

Exhibit 21

Reset culture and mindset

From	To
 Ad hoc management of productivity, fit and finish, maintenance	Common language across organization on productivity, maintenance, look and feel of plant, fit and finish of product and manufacturing tolerance
 “RFQ responder” mindset	“ Business developer ” mindset in exports
 Do it yourself	Partnership -led operating model
 Perfection from start	Fail fast, fail safe approach (digital and analytics)
 Low flexibility to change and innovate	Startup mindset to deal with uncertainty
 Quality in its own silo, focused on specifications only	Attitudinal change to embed quality in daily process (people, design, manufacturing, maintenance, program management, services, etc.)
 System with gaps in financial management	Prudent financial approach as market rewards companies with well-managed books

SOURCE: Expert interviews

Integrate productivity, fit and finish, and maintenance in the “way we work”

Companies could underscore their commitment to productivity by emphasizing world-class maintenance, set up their plant’s look and feel to promote and enable higher efficiency, ensure high-quality fit and finish of their product and limit tolerance for manufacturing variance. It is critical to ensure that the organization’s leaders drive these messages across the organization. To entrench this culture, they might launch organization-wide communication on its importance and establish a cadence of review on key parameters.

Transition from an RFQ responder mindset to a business developer mindset

Auto component manufacturers could be far more proactive, cultivating a business developer mindset that seeks out opportunities, e.g., promoting exports and identifying new markets or customers to target. This would be a definitive shift away from the present mindset where companies largely wait for business to come to them in the form of RFQs and business queries. To nudge this shift in mindset, organizations need to set up dedicated teams both locally and globally, take strategic calls on geographies and products where they want to be present, and develop key account and program management skills for successful delivery.

Move from a “do it yourself” mindset to a partnership-led operating model

When fast innovation is the need of the hour, organizations could gain from strategic tie-ups with other entities to bring in newer capabilities they lack in-house. A well thought-through partnership model that defines the collaborative approach and the rules of the partnership could efficiently plug capability gaps and hasten time to market. To get to such an effective partnership, companies could do the following:

- Designate a dedicated person to scan for potential partners.
- Revise typical contracts and legal conditions to ensure that effective partnerships can be established.
- Conduct specific training programs to support line resources to work in a partnership environment.
- Organize partnership bootcamps with potential partners.

Promote a fail fast, fail safe approach for digital and analytics instead of perfection from the start

In a dynamic market scenario, every entity is trying their best to come out on top, rapidly. Striving to quickly catch and check failure rather than aiming for absolute perfection in the first attempt could be just the learning mindset needed for success at this juncture. For example, to automatically capture plant data, players may quickly run a pilot instead of looking to capture full plant data using sensors at once. The rollout could happen once the pilot is proven successful. Similarly, if an auto component player wants to create a new design for flexible seating arrangement for shared vehicles, they could rapidly create a prototype and test it early on with key stakeholders, iterate and modify based on feedback. The fail fast, fail safe approach is especially relevant for short development cycles and where the competition increasingly stems from emerging players.

Cultivate a startup mindset to deal with uncertainty

With rapid changes in customer preferences, business dynamics and shorter product lifecycles, companies could benefit from a more agile, startup mindset that takes uncertainty in its stride and responds nimbly, is more open to risks and can innovate at a rapid pace. As an example, telematics-based diagnostic and performance management solutions are evolving rapidly and the space sees many startups with frequent new offerings.

Embed quality in daily processes

Achieving world-class quality standards could require companies to look at their own organization, not only their partners and vendors, and to embed quality in every aspect of the work done by each individual in the organization. From looking at quality predominantly at a component specification level, auto component manufacturers could (a) manage the quality of maintenance by looking beyond measuring mean time between failures and repair to also cover the aesthetics of repairs (e.g., “Jugaad” versus the “right” solutions) and (b) enhance the quality of project management by establishing a central war room, e.g., to generate automated reports versus manually created reports.

Maintain financial prudence

The market rewards companies with well-managed books (e.g., successful IPOs, good P/E ratios). As auto component manufacturers move to capitalize on the various opportunities outlined in the previous chapter, some tough financial decisions could be on the agenda, such as acquiring new assets, letting go of existing assets and creating new compensation policies. It will be important to adopt a prudent financial approach while exercising these options.

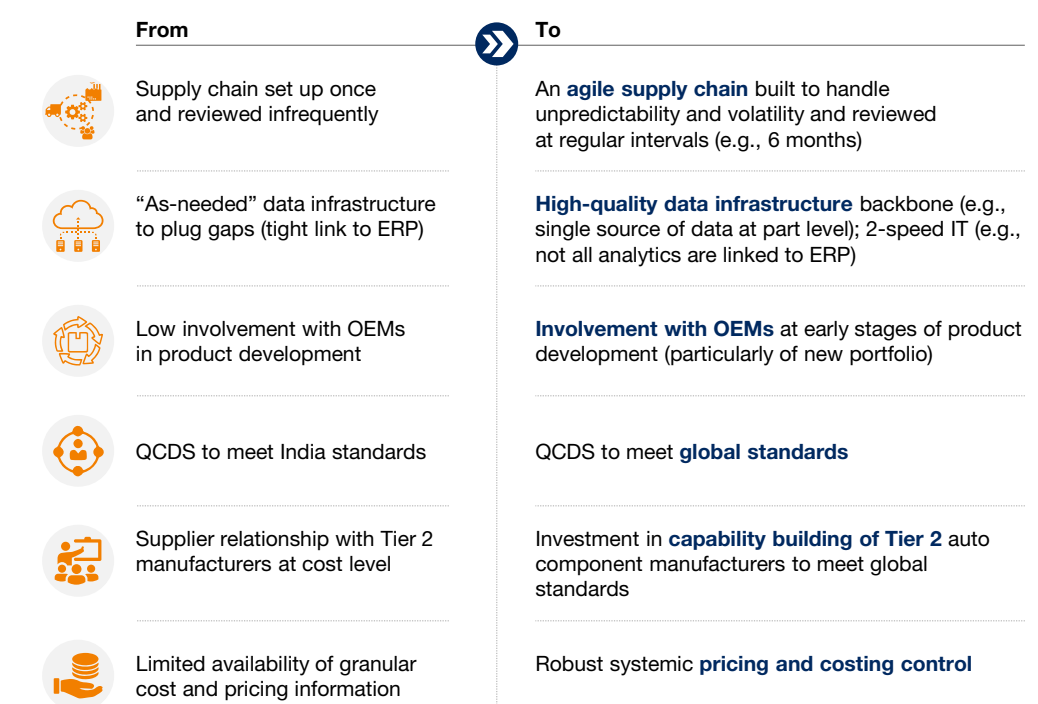


ACHIEVE OPERATIONAL EXCELLENCE

Operational efficiency goes hand in hand with an emphasis on profitable growth. Auto component manufacturers will need to embed excellence across their operations, ranging from focus areas like the supply chain and in-house capabilities to their data infrastructure and product development efforts (Exhibit 22).

Exhibit 22

Achieve operational excellence



SOURCE: Expert interviews

Build an agile supply chain and review it at regular intervals

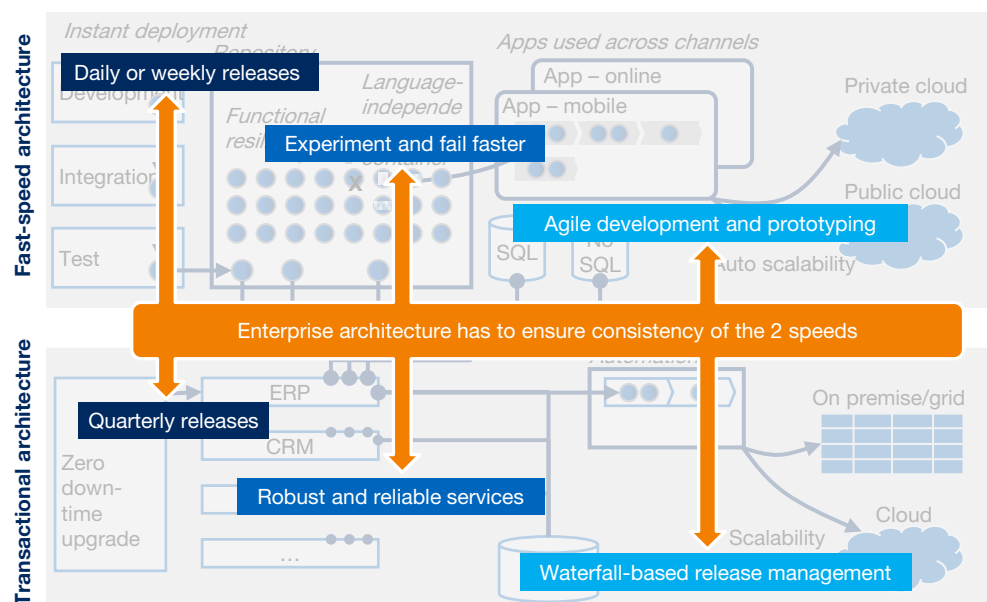
In the spirit of quicker innovation and faster time to market, the supply chain needs constant monitoring to limit unpredictability and deal with increasing volatility across trade, forex, natural disasters, etc. Reviewing the supply chain every six months or so could help to keep it lean and agile, cutting out the deadwood and optimally sourcing products that match the company's manufacturing/business priorities.

Invest in setting up a high-quality data infrastructure backbone

Data is highly valuable for effective decision making and quick innovation. Setting up high-quality data infrastructure could help to manage the data and keep it secure, addressing valid concerns of data theft. A strong data infrastructure backbone can help maintain part-level data, specifications and index variance, etc., which could help in the allocation of costs to specific parts. To facilitate systems agility, the data infrastructure should be supported by enterprise architecture that ensures consistency between the fast-speed and transactional architectures (Exhibit 23).

Exhibit 23

Data and IT backbone – the two-speed enterprise architecture to facilitate systems agility



Engage with OEMs at early stages of product development (particularly of new portfolio)

Auto component manufacturers could engage closely with vehicle manufacturers as they work on early product prototypes. This could offer them a bird's eye view of the future while the products are still concepts, and they could participate in shaping those products. As a result, auto component manufacturers could get a unique head start on strategically developing the components those prototypes might need. This could fuel greater innovation at every step.

Ensure QCDS meets global standards

Auto component manufacturers will benefit from an unwavering focus on quality, cost, delivery and service (QCDS). This means ensuring an organized and systematic approach to offering global standards on quality, fit and finish as well as embedding easy traceability for all products.

Invest in capability building of Tier 2 auto component manufacturers to meet global standards

Move from a supplier relationship with Tier 2 manufacturers at the cost level to a partner-based relationship. QCDS is often a challenge for many Tier 2 companies, as is the lack of scale to meet changing industry demands. Bigger companies could support Tier 2 suppliers by helping them build capability in QCDS, holding training sessions, investing in employee skilling, and helping to set processes which promote quality. Tier 1 companies should not look at Tier 2 proliferation purely based on component costs. Instead, they could take a holistic view based on total cost of ownership, quality and sustenance.

Create robust systemic pricing and costing control

Auto component manufacturers presently have limited availability of granular cost and pricing information. Robust and carefully controlled pricing and costing helps to identify leakages and rationalize portfolio appropriately, curtailing spending and keeping Indian manufacturers cost-competitive in the global market. This would require players to have strong financial control, sufficient data and robust processes to ensure the benefits can be realized.





Stakeholder support for success

Auto component manufacturers are not alone in their desire for growth and global success. Achieving their goals would enhance India's position on the world map as a future-ready hub for manufacturing. It may therefore be prudent to seek and rely on help from other industry stakeholders, each of whom may serve as crucial enablers. Detailed below are some potential actions for each stakeholder.

INDUSTRY BODIES

ACMA, along with various industry bodies representing the interests of auto component manufacturers could play a nodal role to help companies across the board undertake this journey towards the future, by actively doing the following:

- Assist in scale up of IPOs through avenues such as trade fairs, exhibitions and expos focused on bringing real decision makers together.
- Develop skilling curriculum and guidelines, e.g., on project management, Tier 2 quality control.
- Co-create a strategy for import substitution with all stakeholders—OEMs, suppliers, the government.
- Work with raw material and machine tools suppliers to improve quality and accelerate execution.

THE GOVERNMENT

The government could choose to be a valuable support for Indian auto component manufacturers in the following ways:

- Evaluate building Centres of Excellence on quality along with industry bodies.
- Consider setting up upskilling programs at vocational institutes with a focus on talent pool for new manufacturing hubs and addressing current skill gaps.
- Evaluate policy clarity and roadmap, e.g., import, export, EV/hybrid fuel like methanol, CNG, so that the industry can accordingly plan its future path.
- Explore setting up performance cells to monitor labour productivity in auto and allied industries.
- Explore means to incentivize Make in India by working with industries to localize and promote exports.

AUTOMOTIVE OEMS

OEMs, the end customers for auto component manufacturers, could draw component manufacturers' focus towards areas that offer most scope for collaboration and growth, helping to shape their course of action. They could:

- Invest, collaborate and share risk in joint R&D, frugal innovation, validation and testing with suppliers.
- Closely work with industry bodies and auto component manufacturers for import substitution and exports.
- Extend audit support and supplier development practices to Tier 1 and 2 auto component manufacturers.
- Assist in upskilling programs for Tier 1 and 2 auto component manufacturers.



The auto component industry is committed to its vision for impressive growth. Tremendous opportunities await, resting on India's expected strong economic progress in the years ahead. The trends shaping the auto component industry also indicate the important priorities for companies in India and lead to specific opportunities, each of which has enormous potential. Driving companywide change to focus on these priorities, along with support from industry stakeholders, could be a potent recipe for success in a dynamic market environment.

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